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**Does Divorce Risk Depend  
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A Register-Based Study of First  
Marriages in Sweden in 1981-1998**

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## Abstract

The relationship between increasing women's earnings and rising divorce rates frequently has been explained by the so-called *independence effect*: If a wife enjoys a higher earning than her husband does, she gains less from marriage. It has also been argued that in a society with egalitarian gender attitudes this effect is less important. In this paper, we test if the independence effect applies to Sweden, a country in which egalitarian gender views dominate and female labor-force participation and divorce rates are high. Our analysis is based on a large register data set and intensity regression models. We found support for the 'independence effect': The linear relationship between the share of a wife's income and the divorce risk is positive. We also found that the higher the total income of the couple, the lower their divorce risk, but this relationship appears to be less strong.

Keywords: divorce, gender equity, relative income, Sweden

## 1. Introduction

Women's participation in the labor force and divorce rates have been increasing in parallel in recent decades. The rise in divorce rates accelerated in the second half of the 1960s and in the 1970s throughout the western world. The past decades have also witnessed a marked flow of women into the labor market. The relationship between increasing women's earnings and rising divorce rates frequently has been explained by the so-called *independence effect*: When a woman makes an income that allows her to be financially self-supporting, she would find it relatively easy to exit a marriage should she wish to do so. More generally, if a wife earns more money than her husband does, her gains are less from marriage than a wife's whose earnings are lower (Becker, Lands & Michael, 1977). Proponents of the independence effect claim that it would destabilize the relationship between a woman and her husband if the former enjoyed a higher income (Ross & Sawhill, 1975; Moore & Waite, 1981; Spitze & South, 1985; Heckert, Nowak & Snyder, 1998; Ono, 1998).

Several recent studies that use individual level data and advanced statistical methods have challenged the independence effect thesis (see Sayer & Bianchi, 2000, for a literature review). The main argument is that gender ideology mediates the effect of women's relative income on divorce risks (Greenstein, 1995; Oppenheimer, 1997; Sayer & Bianchi, 2000; Brennan et al., 2001). The authors claim that the independence effect thesis is based on traditional gender ideology: When men are mainly engaged in labor-market activity and women are not, women are economically dependent on men. Woman's employment thus does not meet the traditional norm and therefore destabilizes the marriage, so the argument goes. However, in a modern western society, the labor market roles of both sexes have become increasingly similar. This is reflected in a gender ideology that has become increasingly egalitarian. In this context, then, equal income of both partners stabilizes rather than destabilizes marriage. Oppenheimer (1997) pointed out that support for the independence effect hypothesis was found only in cross-sectional aggregate-level studies that use data from the 1950s and 1960s, i.e. when the different family and labor market roles of men and women were still a dominating social norm.

Oppenheimer (1997) distinguished the independence effect from the *income effect*. Focusing only on the ratio of a wife's income to that of her husband and ignoring its interaction with the absolute income level of the family "tends to distract attention from the underlying causes of these ratios and their structure determinants" (Oppenheimer, 1997, p. 431). The income effect implies that a higher total income of the family improves the quality of family life and thereby enhances marital stability. From this perspective, a higher wife's income should have a

stabilizing influence on the marriage as it increases the total family income. So far, only a few studies have distinguished between the independence and income effect. They found the income effect to be weak or non-existent (Greenstein, 1990, 1995).

Sørensen & McLanahan (1987) have argued that a wife's relative income is a valid measure of her economic dependency at all income levels, including that of families with a very high income. Here, the wife may be able to earn money at a level that would allow her to support herself financially. But if the husband has higher earnings, she is dependent on him for maintaining her current living standard and possibly also her social status.

Nock (2001) has introduced the concept of *marriages of equally dependent spouses* (MEDS), defined as unions in which either of the spouses generates between 40 to 60% of the couple's total income. He has shown that in this case, the wife's commitment to the marriage is lower than in other marriages. The husband's commitment, by contrast, does not depend on earnings. The wife's commitment also decreased with the amount of time she spent in paid work. In sum, Nock (2001) has argued that MEDS lead to higher divorce risks mainly because the wife gains less from the partnership, and because the threshold to leave the marriage is relatively low. These arguments are in similar vein to those concerning the independence effect. However, in addition to the economic independence thesis, he argued that the relationship quality suffers because of the wife's perception that the household tasks are unfairly distributed to her disadvantage. This is because men's attitudes to housework have not matched the increase in women's labor-force participation. Note that it may be the wife only who perceives the relationship quality to be suffering. As Sayer & Bianchi (2000) have shown, the wife's satisfaction and happiness with the relationship is a predictor of its divorce, whereas this does not apply to the husband.

Social exchange theorists have hypothesized that a husband uses his non-economic instead of financial resources to maintain what he perceives to be a stable marriage (see Sabaelli and Shehan, 1993, for a literature review). Such resources include love, status, goods and information (Foa & Foa, 1980). If the wife perceives the threshold to exit her marriage low because of her capacity to earn sufficient income of her own, the exchangeable resources of the husband may counterbalance the negative effect that the wife's higher income possibly has on marital stability.

Results from earlier studies vary in a number of aspects, and the way and extent to which the wife's income is related to the divorce risk is not clear. On the one hand, and given the more egalitarian gender views today, equal incomes would not have a destabilizing effect on marriage. On the other hand, it would be easier for either of the spouses to exit an unhappy marriage if one

spouse did not depend on the income of the other. In addition, one needs to consider the level of the combined income of both spouses. Hence, in what way and to what extent does the wife's income, and in particular its ratio to the income of the husband, influence the risk of divorce? In this paper, we address this question by applying it to Sweden, one of the countries with the least traditional system of gender relations and ideology.

Sweden is well known for its high female participation rate in the labor force. There has been a political commitment to sustaining equality between men and women in family and society (Hirdman, 1998). During the 1960s and 1970s, a series of social policies were introduced that aimed at ensuring equal status between the sexes. In 1974, a parental leave program was established according to which employed women / men with young children received 90% of their income if they stayed at home during the first six months of the child's life (this was later extended to 12 months). Full job security for that period was provided. The entitlement period was later prolonged to 15 months, of which at least one month has to be taken by the other parent (see Sundström & Duvander, 1999). The benefit level stood at 80% of the claimant's average earnings during the 240 days preceding birth. More than half of the fathers take at least some parental leave after the birth of their first child and 11% take three or more months (Oláh, 2001). These policies stimulated the rate of women's labor force participation in Sweden to reach a very high level: it increased from 53% in 1963 to 86 % in 1990 (Hirdman, 1998), in 1991 the level stood at 78%, and in 2000 at 71% (European Commission, 2002). Female earnings relative to men's increased, too (Henz & Sundström, 2001).

Sweden is also well known as the forerunner of many of the recent demographic trends that Europe has been witnessing, such as an increase in consensual union formation and non-marital childbearing. Less than 10 % of all unions in Sweden start as non-marital unions (Statistics Sweden, 1995) and 55% of all children are born out of wedlock (Council of Europe, 2003). About half of all Swedish women and nearly as much of all men have a non-marital partnership at age 26 (Bernhardt, 2002). The 'no fault' rule applied in legal proceedings makes divorce relatively easy to obtain. The rise of divorce rates throughout Europe accelerated in the second half of the 1960s. In Sweden, this increase has continued over recent decades. The 1990s level of the total divorce rate is among the highest in Europe: it ranges from 0.44 to 0.55 (Council of Europe, 2003). Sweden has one of the highest union disruption levels in Europe (Andersson, 2003) considering the high prevalence of non-marital unions, which are after all less stable than marriages,

Before a couple divorces, the relationship usually goes through several stages: from becoming disharmonious, through to marital discord and *de facto* separation (Figure 1). Factors that increase the probability of marital discord ultimately also increase the probability of divorce, but the economic and legal aspects of divorce act as constraints – in some cases stronger, in others weaker – to couples who are about to make that transition. Divorce legislation is a typical factor that influences the ease or difficulty with which a couple obtains a *de jure* divorce. In Sweden, legal divorce barriers are minimal: In case of mutual agreement between the spouses, the procedure usually takes about six months for couples with children (Andersson, 1997). Obviously, divorce may also be accompanied by legal disputes over child custody and property, in which case the procedure takes more time. There were no notable changes in Swedish divorce laws during the period covered in our study (1981–1998).

Studies of Swedish divorce trends have highlighted that in the 1980s and 1990s divorce risks increased in particular among couples who have children. At the same time, the number of childless couples and unions with pre-marital children increased – both of these groups have displayed a higher than average risk (Andersson, 1995). Andersson (1997) has demonstrated that Swedish divorce risks vary by parity and the age of the youngest child. Liu (2002) has shown that stepchildren have a detrimental effect on marital stability. We considered the results of both studies when selecting and defining the control variables for the regression models in our paper.

Jalovaara (2001, 2003) has analyzed the association between socioeconomic positions and divorce risk in Finland, a country adjacent to Sweden that shares many of the features in social structure, the Nordic model of the welfare state, and cultural aspects with its neighbor. Let us mention the high level of female labor force participation and the egalitarian gender ideology, both of which particularly enhance the comparability of results from these two countries. Furthermore, the system of registers in both countries allows to analyze the effect of socioeconomic characteristics of both spouses on divorce. . Like several other works on different countries, the Finnish ones confirmed the relationship between the socioeconomic status and divorce is an inverse one. In an article on the interactive effects of spouses' socioeconomic positions, Jalovaara (2003) found that couples where the wife had a higher income than her husband were somewhat more prone to divorce, net of the income level effects of both spouses and a large number of socioeconomic and other control variables, thus showing some support for the independence effect.

We base our paper on the following hypotheses.

Hypothesis 1 – *independence effect*:

A wife who enjoys higher earnings than her husband has a lower economic threshold to leave an unhappy marriage. The opposite applies to wives with a lower income. They face the prospects of lower living standards and serious economic hardships in case of divorce. This is reflected in higher divorce risks of couples if the wife's earnings are higher than that of her husband. By the same token, it is manifested in lower divorce risks if the wife makes less of an income than her husband does.

Hypothesis 1a – *effect of equally dependent spouses*:

When the spouses contribute to the couple's income 40–60%, their living standard depends to roughly an equal extent on each other's earnings. The wife is more likely to perceive the distribution of household work as unfair. At the same time her threshold to exit the marriage is relatively low as she is financially self-supporting. The divorce rates of such couples are thus higher than that of couples where the wife earns less than 40% of it's income.

Hypothesis 2 – *income effect*:

A higher combined income earned from employment improves the couple's quality of life and in this way enhances marriage stability. It follows that divorce risks decrease with the couple's total income rising.

Hypothesis 3 – *social exchange effect*:

A husband may compensate his wife's higher earnings by offering important non-economic resources, such as experience and education. Among couples where the wife earns more than the husband does, the divorce risk is lower if the husband is older and / or his education level is higher than that of the wife.

The prospect of being financially self-supporting without making substantial sacrifices in the current living standard naturally lowers both partners' barriers for divorce. The *independence effect* and the *equally dependent spouses* hypotheses are mainly concerned with this stage of transition to divorce, although the wife's higher earnings may also be a source for marital discord, if not a disharmonious marriage, if the couple believes in traditional gender roles. The hypotheses on *income effect* and on the *social exchange effect* are primarily related to factors that influence relationship quality.



## 2. Data and method

### 2.1. Data

We use a set of Swedish register data that contains records of all women born in Sweden between 1945 and 1981. Statistics Sweden prepared it by linking individual-level information on demographic, social and economic variables from different registers. In our study, we include women who entered their first marriage between January 1981 and December 1998, and we analyze the divorce risks of these unions. We limit our research to first marriages because entering a second or higher order marriage is highly selective in Sweden. Our analysis is also restricted to marriages between spouses born in Sweden, so as to eliminate any influence that the cultural origin or cultural heterogeneity of spouses would have on our results. Furthermore, we exclude both early (before age 20) and late first marriages (after age 35) to avoid distortion of our results by sub-groups whose divorce risk is known to be substantially different.

The social and economic variables pertain either to the status at the end of a calendar year or income received during the year. Demographic events – marriage, divorce, and birth of children – are recorded to the precision of a month. The individual records of husbands are linked to the records of their wives. This enables us to study the association of the combined socio-economic characteristics of both spouses with marital stability.

### 2.2. Study variables

Our dependent variable is the event of divorce measured at a month's precision. The explanatory variables that we use to test our hypotheses are *relative income*, *total income*, *age difference* and *relative level of education*.

For both income variables, we use the total income from employment and social security benefits (unemployment insurance, parental leave, student allowances). Since we apply this information to explain divorce risks, we specify our models so that income received during year  $t$  is used to explain the divorce risks during year  $t+1$ . *Relative income* is defined as the wife's contribution in percentage to the total income of both spouses. The variable is represented in five categories, using cut-points at every 20th percentile (Table 1). *Total income* is the sum of both spouses' income adjusted for inflation and expressed in Swedish crowns (SEK) of the 1998 value. This variable is listed in four categories that we obtained by using quartile cut-off points in the 1980 distribution of married couples by total income. Both of these variables are time-varying covariates, the values of which are updated at the end of each calendar year.

With spouses' *age difference* and *relative level of education* we measure the potential resources that a husband may use to compensate for his lower income. *Age difference* is calculated using the spouses' exact dates of birth. Education attainment refers to the highest level of education obtained. We define it as a time-varying covariate that is updated each time the person completes a higher level of education than he/she previously had. In this study, the education level is categorized as (a) *pre-gymnasium*, including pre-school education and nine years of compulsory basic education; (b) *gymnasium*, including upper secondary school (usually three years) and adult education; (c) *post-gymnasium*, including college and university. The *relative level of education* reflects the ratio of the spouses' education level according to these three categories. Hoem (1997a) has shown the emergence and increase of a negative correlation between a wife's education level and divorce risk in Sweden in the 1980s; a negative correlation has also been found in the United States (Lillard & Waite, 1993).

In addition, we use in our models a number of control variables that are known to influence divorce risk. *Wife's age at marriage* is one of them: it is found to have a powerful impact on marital breakdown, even more so than socio-economic status variables such as social class (Murphy, 1985). We define the variable as a categorical covariate with three categories: 20–23, 24–28 and 29–35.

Many studies, including those using Swedish data (Andersson, 1995, 1997; Hoem, 1997b), have shown that divorce risk varies by shared children, childless couples usually having a higher divorce risk than couples with children, and couples with small children or when the wife is pregnant having the lowest divorce risk. For our analysis, we define the variable *age of youngest shared child* as a time-varying covariate that has the following categories: no shared children, wife currently pregnant, youngest child younger than one year, age of youngest child from one to two, three to five, six to eight, and nine or more years.

It has been shown by Becker, Lands and Michael (1977) and Cherlin (1978) for the United States and by Hoem (1997a) and Liu (2002) for Sweden that the presence of premarital children increases the risk of divorce. Based on these results, we include separate control variables for the number of the *wife's children from previous unions* and *husband's children from previous unions*. These variables include all children before the current marriage and whose other parent is not the current husband or wife. Marriages of second and higher order are more prone to dissolve than first marriages, which has also been attributed to the notion that relationships in stepfamilies generally are less harmonious and gratifying (see Furstenberg, 1990). This is because family norms are usually ambiguous and bonds between stepparents and their children

are weaker and sometimes fraught with conflict. Erlangsen and Andersson (2001) have recently shown that divorce risks rise with the order of marriage also in Sweden. We include the *order of the current marriage for the husband* to control for this.

### 2.3. Statistical analysis

We estimated hazard regression models of the divorce risks, defined as:

$$\ln \mu_i(t) = y(t) + \sum_j \alpha_j x_{ij} + \sum_l \beta_l w_{il}(t)$$

where  $t$  denotes marriage duration,  $\mu_i(t)$  represents the intensity of divorce at duration  $t$  for individual  $i$ ,  $y(t)$  is the logarithm of the baseline intensity,  $x_{ij}$  stands for fixed covariates,  $\alpha_j$  for coefficients for fixed covariates,  $w_{ij}$  for time-varying covariates, and  $\beta_i$  for coefficients of time-varying covariates.

The baseline time parameter of the divorce risk is the duration of marriage, which is specified as a linear spline with nodes at 1, 2, 3, 5, 7, and 11 years, until observations are censored at 15 years of marriage. Observations are also censored at the emigration or death of either spouse and at the end of the year 1998, whichever occurs first.

Because of the large size of our data set, we do not use statistical significance as a criterion for model building or for the assessment of the results: even very small coefficients render statistical significance. Our selection of control variables into the models is inspired by results of earlier studies. The rare occasions where a coefficient is not significant according to the likelihood ratio test at the five-percent level are marked in the tables. We report results from the models listed below:

Model 1 = control variables + total income + relative income + age difference

Model 1a = Model 1 + total income \* relative income

Model 2 = Model 1 + husband's education level + wife's education level

Model 3 = Model 2 + relative level of education

Model 3a = Model 3 + relative level of education \* relative income

We fit Models 1 and 2 to test the independence effect and income effect simultaneously, controlling for spouses' level of education in Model 2 and additionally for relative education in

Model 3. We also tested the interaction of our two income variables (Model 1a), the interactions of age difference with relative income, and relative education with relative income (Model 3a). We used *aML* software to fit the models (Lillard & Panis, 2000).

### **3. Results**

#### **3.1. Control variables**

The relative divorce risks by the control variables change very little from one model to another, and those obtained from Model 1 reflect well their effects (Table 2). These effects are consistent with the results from earlier studies that have motivated us to control for them. Divorce risks decreased with the wife's *age at marriage*. Couples where the wife's age at first marriage was 20 to 23 had a 70% higher risk of divorce than couples where the wife entered marriage aged 24 to 28; when the wife's age at marriage was from 29 to 35, the couples' divorce risk was lower than in the middle group by 36%.

The more children the wife or the husband had from a previous relationship, the more likely the marriage was to dissolve. Apparently, the wife's pre-union children have a larger disruptive effect than those of the husband. Having a shared child is a sign of commitment to the relationship (Thomson et al., 2002), and this is clearly reflected in the lower divorce risk of couples with children as compared to childless couples. The risk of divorce also was slightly higher when the husband had been married before.

Differently from the other control variables, the relative risks by age of youngest shared child vary between a model that includes economic variables (Model 1) and a model that includes the demographic control variables only (results not shown). When economic variables are not included, the divorce risk of childless couples is estimated to be more than three times higher than the risk of couples with shared children. In Model 1, which also includes most explanatory variables, the estimated risks of couples whose youngest child is older than two exceed those of childless couples. The variation among couples with children displays the same pattern in both models, with the age of the youngest child from three to five years being associated with the highest divorce risk.

#### **3.2. Spouses' income, education, and age difference**

We first examine the main effects of the explanatory variables estimated in Model 1, which includes the demographic control variables and the income variables (Table 3). There was a clear

linear pattern in the effect of a wife's relative income: the higher the wife's share in the couple's income, the higher the divorce risk. When the wife contributed 80% or more to the total income, the divorce risk was twice as high as when she contributed less than 20%; other categories by relative income faced a divorce risk between those two extremes. These estimates are controlled for the couple's total income. The effect of the couple's total income also had a linear pattern, namely that of a decreasing divorce risk by the level of income. This effect was, however, considerably smaller than that of relative income: the divorce risk of couples in the highest income category was lower by 21% than that in the lowest income bracket, others were in-between.

A large age difference between the spouses increased their divorce risk. When the husband was one or two years older than the wife – which is the most common age configuration – the couple faced the lowest divorce risk. It increased the more a couple deviated from this. The increase in the divorce risk was notably larger if the husband was younger than the wife as compared to the opposite situation. The divorce risk varied only marginally among couples where the wife's relative age ranged from five years younger to one year older than the husband's.

In Model 2 we add both the wife's and the husband's level of education, both of which showed a strong influence on divorce risk (Table 3). A higher education level of either spouse clearly decreased the divorce risk. A wife's education has a somewhat larger influence, as couples with a wife who had attained higher education were half as likely to divorce than couples where the wife had a low education level. These estimates are controlled for the income variables, but they change very little only when these variables are removed from the model (results not shown). This relationship also holds when we add relative education level to the model.

If the wife's education was higher than that of the husband, the couple had a *lower* divorce risk than other couples. There was no difference between couples of the same education level and couples where the husband's education was higher than that of the wife. The effect of relative education on divorce risk is by far smaller than that of relative income.

The inclusion of education level in the model did not have any influence on the relative risks by relative income, but we noted some influence on the risks by couple's total income. Given the correlation between the level of education and income, part of the reduction in divorce risks represented by the couple's total income was captured by the level of education. The effect of the couple's total income on divorce risks remained also after controlling for education level, but it no longer showed the linear pattern. The main contrast was between couples in the lowest income bracket and all the others, whereas the differences between other categories of couple's

total income leveled off and, in the case of the highest income bracket, even turned to a slightly opposite direction.

We now examine the interactive effects of the income variables, starting with the interaction of a wife's share in a couple's income and the couple's total income. Although the general pattern of increase in divorce risks by wife's relative income was observed in most of the couples' total income brackets, and the decrease in divorce risk by total income was also observed in most of the categories of relative income, there were some important interactive effects (Figure 2). When the husband made the highest share of the combined earnings, only couples in the lowest income bracket could be distinguished as facing a high divorce risk; other groups by level of income faced the same divorce risk. When both partners enjoyed about equal incomes or when the wife earned 60–80% of the total income, there was an obvious decrease in divorce risk by absolute income. If the wife alone earned a very high income, the divorce risk was much higher than in any other category, deviating from the pattern of decreasing divorce risk with absolute income. Although the difference between the divorce risk of these couples and the risk predicted by the main effects of relative and absolute income was statistically significant in our large data set, only 0.01% of all couples had such income configuration.

It is worthwhile to look at these interaction effects also from another angle, to highlight that if a couple's high income was achieved by approximately equal contribution of both spouses, the divorce risk was somewhat lower than in couples with a more traditional relative income, that is, where most of the high combined income came from the husband. This does not follow the general pattern of increasing divorce risk by wife's share in a couple's income. In other income brackets, the couples with about equal income did not display a deviation from the general pattern.

The interaction of spouses' relative income with age difference did not reveal any new pattern: the effect of relative income was revealed universally in all classes of spouses' age difference. However, we noted a small interaction effect of relative income and relative education. Overall, when the husband had a higher education level than the wife, the couple faced a higher divorce risk. However, when the wife earned 60–80% of the couple's income, this relationship did not hold (Figure 3). Differently from all the other categories of relative income, in this category the couples where the husband's education level was higher had the same level of divorce risk as couples where the wife's education level was higher.

## 4. Discussion

We conducted our analysis using Swedish register data, which has several advantages. Since the data set covers the entire population, we did not have to be concerned with sampling issues and statistical power to support the observed substantive differences. We also did not need to deal with reporting errors that may be encountered in self-reported income data. With the exception of two recent studies from Finland (Jalovaara, 2001, 2003), most earlier work on the relationship between individual-level economic variables and divorce risk has been based on sample surveys.

Throughout our analyses, we found strong support for the independence effect hypothesis, as the divorce risk increased linearly with the share of the wife's income in the couple's total income. We interpret this result in line with the dominant arguments in the literature, according to which a higher income lowers the wife's constraint to exit an unhappy marriage. For women whose income is high in both relative and absolute terms, an additional interpretation may be that a high absolute income level grants them greater freedom in pursuing individual life goals, and that they may place high requirements on the qualities of their partner. A couple's non-traditional income ratio may have a negative influence on the quality of the relationship by threatening the traditional division of labor and breadwinner role if these are valued by at least one of the spouses, usually the husband. The egalitarian value orientations prevailing in Sweden are assumed to reduce the influence of the non-traditional income ratio of spouses on their relationship quality. Against this background, the emergence of such a strong independence effect in our study may be seen as somewhat unexpected. However, results of a recent study from Finland, where the context of gender relations resembles that of Sweden, were also consistent with the independence effect (Jalovaara, 2003).

The direction of the causal link between relationship quality and relative income can also be the opposite one, however. Johnson & Skinner (1986) and Rogers (1999) have shown that increases in perceived marital discord are related to increases in wives' income. If this relationship holds in Sweden, it would explain some of the variation in divorce rates by spouses' relative income that we presented.

With register data, it would not be possible to disentangle the relative importance of those interpretations: a self-supporting wife has a lower threshold to exit an unhappy marriage, the unconventional power relations resulting from the wife's higher income decreases the relationship quality, or marital discord stimulating wives to increase their income. It is likely that they all make some contribution to shaping the observed divorce pattern by spouses' income ratio.

The other main finding of our study supports the income effect. Higher income, whether from a wife's or a husband's earnings, improves the family's quality of life and in this way enhances marital stability. High total income also increases the amount of assets and property that the couple owns. This may be accompanied by complicated financial arrangements that increase the cost of marital dissolution for both spouses and in this way reduce their divorce risk. In difference to the previous studies that have aimed at distinguishing between the income and the independence effect (Greenstein, 1990, 1995), our finding points to the existence of this effect, though the contrasts between different income categories are not large. Jalovaara's (2003) results from Finland also point to the direction of the income effect, although she did not test that explicitly.

We found some weak support for the social exchange hypothesis. When the wife earned 60–80% of the income and the husband enjoyed a higher education than the wife, the marital union faced a relatively low divorce risk. Couples with other income ratios had a relatively high risk. Hence, the argument that education has a compensating effect – although it may be limited – is valid to a certain extent only. However, no such compensatory effect was evident when the wife contributed to almost all of the couple's income. Note that our measures of status, experience and information are approximate, and more direct measures of exchangeable resources, including the subjective assessment of the relationship quality, would be necessary to cast more light on their effect on divorce.

On the whole, we found support for the hypothesis on the *equally dependent spouses*. However, the situation of equal dependence had some relevance for the divorce risk of highest earning couples. Notably, equally dependent spouses with high income faced a lower divorce risk than couples with high income where the wife's contribution was 20–40%. Thus, the pattern in the highest income bracket runs counter to Nock's (2001) argument, according to which equally dependent spouses have higher divorce rates than others, whereas in other income brackets the suggested conjecture is confirmed.

Our study has highlighted that couples where the wife earns more than the husband have a relatively high divorce risk not only in a traditional set up but also in a society that is organized on the principles of gender equality and with dominant egalitarian gender views.

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Table 1 Number of divorces and couple-months observed in marriages by the study variables.

Variable name	Category	Divorces		Couple-months observed in marriages	
		Number	%	Number	%
Wife's share in couple's total income	0–20%	4,046	6	253,928	7
	20–40%	23,452	35	1,329,407	38
	40–60%	32,931	49	1,682,854	48
	60–80%	4,779	7	184,292	5
	80%+	2,265	3	67,297	2
Couple's total income (10,000 SEK in 1998 value)	0–25.2	22,455	33	985,049	28
	25.2–40.3	28,865	43	1,498,054	43
	40.3–55.5	13,026	19	800,890	23
	>55.5	3,127	5	233,786	7
Husband's education level	pre-gymnasium	14,403	21	617,654	18
	gymnasium	35,772	53	2,040,000	58
	post-gymnasium	5,057	8	497,415	14
	unknown	12,241	18	362,710	10
Wife's education level	pre-gymnasium	14,672	22	457,454	13
	gymnasium	46,140	68	2,545,498	72
	post-gymnasium	5,057	7	436,761	12
	unknown	1,604	2	78,066	2
Couple's relative education level	husband higher than the wife	10,226	15	505,113	14
	equal	32,772	49	1,986,376	56
	wife higher than the husband	11,025	16	598,241	17
	either education level unknown	13,450	20	428,051	12
Couple's age difference	husband 6 or more years older	14,524	22	579,379	16
	husband 3–5 years older	16,649	25	890,912	25
	husband 1–2 years older	16,098	24	946,025	27
	age difference smaller than 1 year	11,819	18	717,782	20
	wife 1–2 years older	5,073	8	253,519	7
	wife 3 or more years older	3,310	5	130,163	4
Wife's age at marriage	20–23	21,328	32	766,177	22
	24–25	29,525	44	1,638,627	47
	29–35	16,620	25	1,112,975	32
Number of wife's children from previous partnerships	0	57,942	86	3,289,566	94
	1	7,177	11	180,797	5
	2+	2,354	3	47,415	1
Number of husband's children from previous partnerships	0	57,153	85	3,206,953	91
	1	6,103	9	189,794	5
	2+	4,217	6	121,032	3
Age of youngest shared child	no child	15,575	23	460,102	13
	woman pregnant under 1 year	319	0	276,114	8
	1–2 years	885	1	503,797	14
	3–5 years	11,776	17	822,153	23
	6–8 years	21,846	32	733,619	21
	9 years or older	10,284	15	404,091	11
		6,787	10	317,903	9
Husband's order of marriage	first	61,550	91	3,317,934	94
	second or higher	5,923	9	199,846	6

Table 2 Relative divorce risk by control variables.

Variable	Category	Relative risk
Wife's age at marriage	20-23	1.70
	24-25	1.00
	29-35	0.64
Number of wife's children from previous partnerships	0	1.00
	1	2.12
	2+	2.50
Number of husband's children from previous partnerships	0	1.00
	1	1.67
	2+	1.68
Age of youngest shared child	no child	2.00
	woman pregnant	0.05
	under 1 year	1.00
	1-2 years	1.81
	3-5 years	3.26
	6-8 years	3.16
	9 years or older	2.94
Husband's order of marriage	first	1.00
	second or higher	1.07

Notes: Estimated from a hazard regression model that includes all these variables, the two income variables, and spouse's age difference (Model 1). All estimates differ significantly from the reference category at the one-percent level.

Table 3 Relative divorce risk by explanatory variables. Estimated from hazard regression models that also include the control variables presented in Table 1.

Variable	Category	Relative risk		
		Model 1	Model 2	Model 3
Wife's share in couple's total income	0%-20% (ref.)	1.00	1.00	1.00
	20%-40%	1.29	1.38	1.38
	40%-60%	1.51	1.62	1.62
	60%-80%	1.97	2.11	2.12
	80%-100%	2.10	2.19	2.19
Couple's total income (10,000 SEK in 1998 value)	0-25.2 (ref.)	1.00	1.00	1.00
	25.2-40.3	0.88	0.87	0.87
	40.3-55.5	0.83	0.86	0.86
	>55.5	0.79	0.92	0.92
Couple's age difference	husband 6 or more years older	1.16	1.12	1.12
	husband 3 to 5 years older	1.02	1.00	1.00
	husband 1 to 2 years older	<i>0.99</i>	<i>0.98</i>	<i>0.98</i>
	age difference smaller than 1 year (ref.)	1.00	1.00	1.00
	wife 1 to 2 years older	1.24	1.22	1.22
	wife 3 or more years older	1.53	1.48	1.48
Husband's level of education	pre-gymnasium (ref.)		1.00	1.00
	gymnasium		0.88	0.83
	post-gymnasium		0.71	0.63
Wife's level of education	pre-gymnasium (ref.)		1.00	1.00
	gymnasium		0.66	0.69
	post-gymnasium		0.52	0.57
Couple's relative level of education	husband's education higher			<i>1.01</i>
	same level of education (ref.)			1.00
	wife's education higher			0.89

Notes: Relative risks *not* significantly different from the reference category at five percent level are in italics. All other estimates are significant at the five-percent level.

Figure 1 Stages of marital dissolution

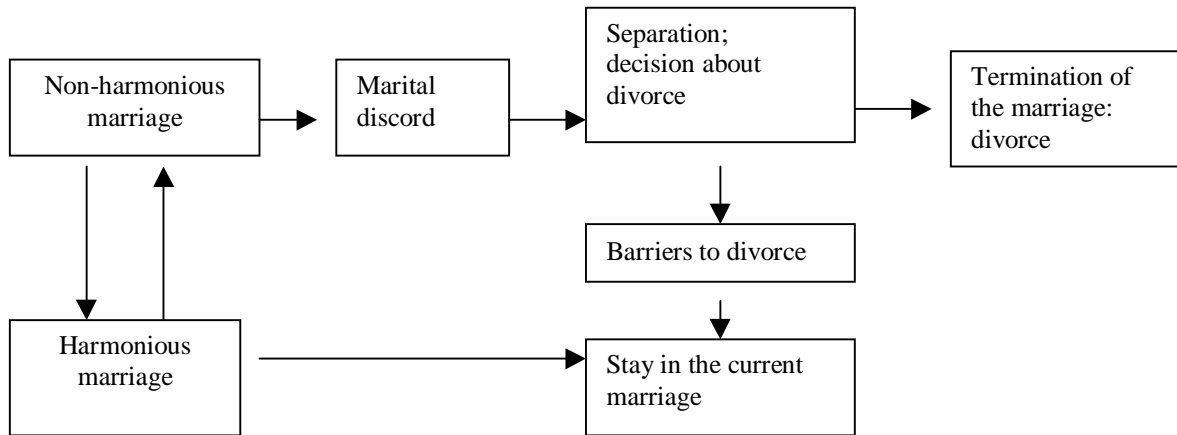


Figure 2 Relative divorce risk by relative and total income

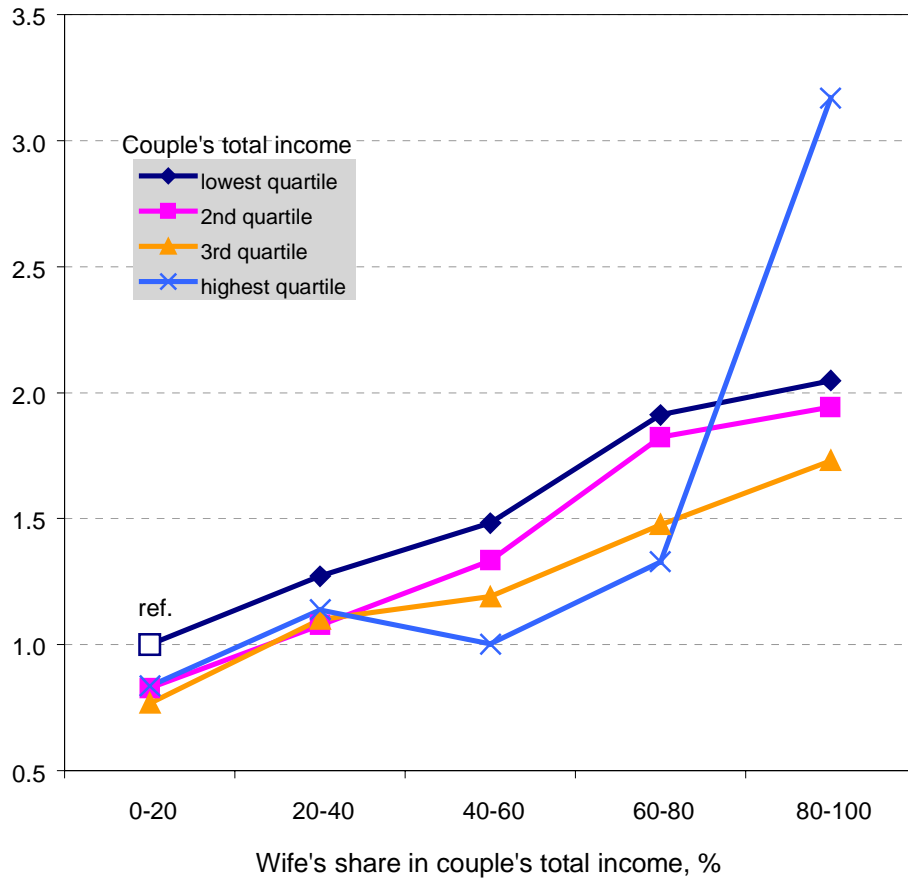


Figure 3 Relative divorce risk by relative income and relative education

